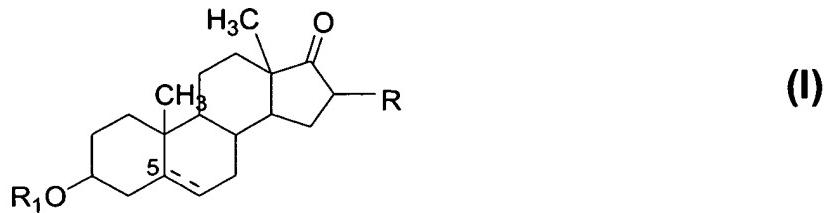


**WHAT IS CLAIMED IS:**

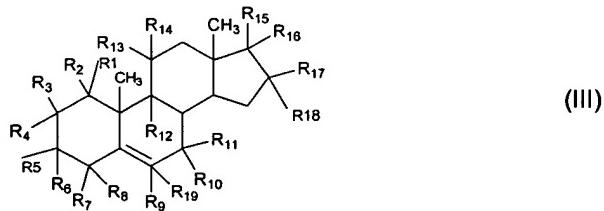
1. A pharmaceutical composition, comprising a pharmaceutically or 5  
veterinarily acceptable carrier, a first active agent and a second active agent effective  
to treat asthma, chronic obstructive pulmonary disease, or a respiratory or lung  
disease,

(a) the first active agent is a non-glucocorticoid steroid having the  
chemical formula

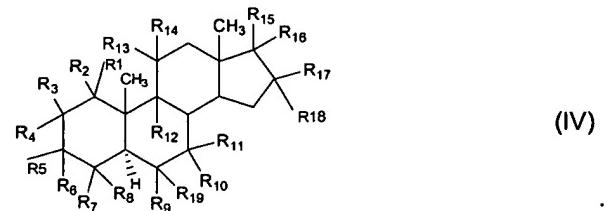


wherein the broken line represents a single or a double bond; R is hydrogen or a  
halogen; the H at position 5 is present in the alpha or beta configuration or the  
10 compound of chemical formula I comprises a racemic mixture of both configurations;  
and R<sup>1</sup> is hydrogen or a multivalent inorganic or organic dicarboxylic acid covalently  
bound to the compound;

a non-glucocorticoid steroid of the chemical formula



15 ;  
a non-glucocorticoid steroid of the chemical formula



wherein R1, R2, R3, R4, R5, R7, R8, R9, R10, R12, R13, R14 and R19 are  
independently H, OR, halogen, (C1-C10) alkyl or (C1-C10) alkoxy, R5 and R11 are  
20 independently OH, SH, H, halogen, pharmaceutically acceptable ester,  
pharmaceutically acceptable thioester, pharmaceutically acceptable ether,

pharmaceutically acceptable thioether, pharmaceutically acceptable inorganic esters, pharmaceutically acceptable monosaccharide, disaccharide or oligosaccharide, spirooxirane, spirothirane, -OSO<sub>2</sub>R<sub>20</sub>, -OPOR<sub>20</sub>R<sub>21</sub> or (C<sub>1</sub>-C<sub>10</sub>) alky, R<sub>5</sub> and R<sub>6</sub> taken together are =O, R<sub>10</sub> and R<sub>11</sub> taken together are =O; R<sub>15</sub> is (1) H, halogen,

5 (C<sub>1</sub>-C<sub>10</sub>) alkyl, or (C<sub>1</sub>-C<sub>10</sub>) alkoxy when R<sub>16</sub> is -C(O)OR<sub>22</sub>, (2) H, halogen, OH or (C<sub>1</sub>-C<sub>10</sub>) alkyl when R<sub>16</sub> is halogen, OH or (C<sub>1</sub>-C<sub>10</sub>) alkyl, (3) H, halogen, (C<sub>1</sub>-C<sub>10</sub>) alkyl, (C<sub>1</sub>-C<sub>10</sub>) alkenyl, (C<sub>1</sub>-C<sub>10</sub>) alkynyl, formyl, (C<sub>1</sub>-C<sub>10</sub>) alkanoyl or epoxy when R<sub>16</sub> is OH, (4) OR, SH, H, halogen, pharmaceutically acceptable ester, pharmaceutically acceptable thioester, pharmaceutically acceptable ether,

10 pharmaceutically acceptable thioether, pharmaceutically acceptable inorganic esters, pharmaceutically acceptable monosaccharide, disaccharide or oligosaccharide, spirooxirane, spirothirane, -OSO<sub>2</sub>R<sub>20</sub> or -OPOR<sub>20</sub>R<sub>21</sub> when R<sub>16</sub> is H, or R<sub>15</sub> and R<sub>16</sub> taken together are =O; R<sub>17</sub> and R<sub>18</sub> are independently (1) H, -OH, halogen, (C<sub>1</sub>-C<sub>10</sub>) alkyl or -(C<sub>1</sub>-C<sub>10</sub>) alkoxy when R<sub>6</sub> is H OR, halogen. (C<sub>1</sub>-C<sub>10</sub>) alkyl or -

15 C(O)OR<sub>22</sub>, (2) H, (C<sub>1</sub>-C<sub>10</sub>) alkyl).amino, ((C<sub>1</sub>-C<sub>10</sub>) alkyl)<sub>n</sub> amino-(C<sub>1</sub>-C<sub>10</sub>) alkyl, (C<sub>1</sub>-C<sub>10</sub>) alkoxy, hydroxy -(C<sub>1</sub>-C<sub>10</sub>) alkyl, (C<sub>1</sub>-C<sub>10</sub>) alkoxy -(C<sub>1</sub>-C<sub>10</sub>) alkyl, (halogen)<sub>m</sub> (C<sub>1</sub>-C<sub>10</sub>) alkyl, (C<sub>1</sub>-C<sub>10</sub>) alkanoyl, formyl, (C<sub>1</sub>-C<sub>10</sub>) carbalkoxy or (C<sub>1</sub>-C<sub>10</sub>) alkanoyloxy when R<sub>15</sub> and R<sub>16</sub> taken together are =O, (3) R<sub>17</sub> and R<sub>18</sub> taken together are =O; (4) R<sub>17</sub> or R<sub>18</sub> taken together with the carbon to which they are

20 attached from a 3-6 member ring containing 0 or 1 oxygen atom; or (5) R<sub>15</sub> and R<sub>17</sub> taken together with the carbons to which they are attached from an epoxide ring; R<sub>20</sub> and R<sub>21</sub> are independently OH, pharmaceutically acceptable ester or pharmaceutically acceptable ether; R<sub>22</sub> is H, (halogen)<sub>m</sub> (C<sub>1</sub>-C<sub>10</sub>) alkyl or (C<sub>1</sub>-C<sub>10</sub>) alkyl; n is 0, 1 or 2; and m is 1, 2 or 3; or pharmaceutically or veterinarily acceptable salts thereof; and

25 (b) the second active agent is a  $\beta_2$ -agonist bronchodilator.

2. The pharmaceutical composition of claim 1, wherein the first active agent is a non-glucocorticoid steroid having the chemical formula (I), wherein said multivalent organic dicarboxylic acid is SO<sub>2</sub>OM, phosphate or carbonate, wherein M comprises a counterion, wherein said counterion is H, sodium, potassium, magnesium, aluminum, zinc, calcium, lithium, ammonium, amine, arginine, lysine, histidine,

triethylamine, ethanolamine, choline, triethanoamine, procaine, benzathine, tromethamine, pyrrolidine, piperazine, diethylamine, sulfatide

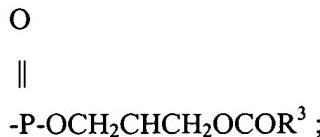


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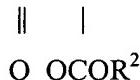


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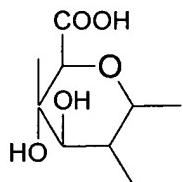
or phosphatide



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wherein R<sup>2</sup> and R<sup>3</sup>, which are the same or different, and are straight or branched (C<sub>1</sub>-C<sub>14</sub>) alkyl or glucuronide



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3. The pharmaceutical composition of claim 2, wherein said first active agent is dehydroepiandrosterone.

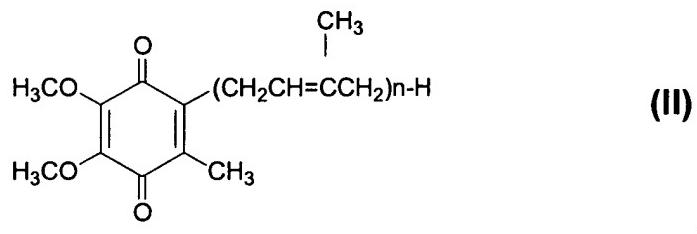
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4. The pharmaceutical composition of claim 2, wherein said first active agent is dehydroepiandrosterone-sulfate.

5. The pharmaceutical composition of claim 1, wherein said β2-agonist bronchodilator is a salmeterol or formoterol.

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6. The pharmaceutical composition of claim 1, further comprising a ubiquinone or pharmaceutically or veterinarily acceptable salt thereof, wherein the ubiquinone has the chemical formula



,  
wherein n is 1 to 12.

7. The pharmaceutical composition of claim 1, wherein the  
5 pharmaceutical composition comprises particles of inhalable or respirable size.

8. The pharmaceutical composition of claim 7, wherein the particles are  
about 0.01  $\mu\text{m}$  to about 10  $\mu\text{m}$  in size.

10 9. The pharmaceutical composition of claim 7, wherein the particles are  
about 10  $\mu\text{m}$  to about 100  $\mu\text{m}$  in size.

10. A kit comprising a delivery device and the pharmaceutical composition  
of claim 1.

15 11. The kit of claim 10, wherein the delivery device is an aerosol generator  
or spray generator.

20 12. The kit of claim 11, wherein the aerosol generator comprises an  
inhaler.

13. The kit of claim 12, wherein the inhaler delivers individual pre-  
metered doses of the formulation

25 14. The kit of claim 12, wherein the inhaler comprises a nebulizer or  
insufflator.

15. A method for reducing the probability of or treating asthma in a subject, comprising administering to a subject in need of such treatment a prophylactically or therapeutically effective amount of the pharmaceutical composition of claim 1.

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16. A method for reducing the probability of or treating of chronic obstructive pulmonary disease in a subject, comprising administering to a subject in need of such treatment a prophylactically or therapeutically effective amount of the pharmaceutical composition of claim 1.

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17. A method for treatment of respiratory, lung or malignant disorder or condition, or for reducing levels of, or sensitivity to, adenosine or adenosine receptors in a subject, comprising administering to a subject in need of such treatment a prophylactically or therapeutically effective amount of the pharmaceutical composition of claim 1.

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18. The method of claim 17, wherein the disorder or condition comprises asthma, chronic obstructive pulmonary disease (COPD), cystic fibrosis (CF), dyspnea, emphysema, wheezing, pulmonary hypertension, pulmonary fibrosis, hyper-responsive airways, increased adenosine or adenosine receptor levels, adenosine hyper-sensitivity, infectious diseases, pulmonary bronchoconstriction, respiratory tract inflammation or allergies, lung surfactant or ubiquinone depletion, chronic bronchitis, bronchoconstriction, difficult breathing, impeded or obstructed lung airways, adenosine test for cardiac function, pulmonary vasoconstriction, impeded respiration, Acute Respiratory Distress Syndrome (ARDS), administration of adenosine or adenosine level increasing drugs, infantile Respiratory Distress Syndrome (infantile RDS), pain, allergic rhinitis, cancer, or chronic bronchitis.

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